



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of:
Craig D. ULLMAN et al.

Application No.: 09/409,305

Art Unit: 2141

Filed: September 29, 1999

Examiner: Stephan F. Willett

For: ENHANCED VIDEO PROGRAMMING
SYSTEM AND METHOD UTILIZING
USER-PROFILE INFORMATION

APPELLANT'S BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Washington, D.C. 22313-1450

Sir:

This is a timely appeal from the final rejection of claims 149-183 in the Office Action mailed Sept. 8, 2004.

I. REAL PARTY IN INTEREST

The real party in interest is ACTV, Inc.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences within the meaning of 37 CFR 1.192(c)(2) known to appellant or undersigned counsel.

III. STATUS OF CLAIMS

Claims 149-183 (reproduced in the attached Appendix) are pending in this application. Claims 1-148 have been cancelled.

Claims 149-150, 158-161, 164-166, 169-170 and 175-176 are finally rejected under 35 USC 103(a) as being unpatentable over Becker (U.S. 5,878,223) in view of Kramer (U.S. Patent No. 6,327,574).

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Claims 151-157, 162, 163, 167, 168, 171-174 and 177-183 are finally rejected under 35 USC 103(a) as being unpatentable over Becker in view of Kramer in further view of Savitzky (U.S. Patent No. 6,012,083).

IV. STATUS OF AMENDMENTS

In an amendment filed on Dec. 8, 2004, after final rejection of all pending claims, the feature of “inheriting user profile attributes into the user profile from a group of which the user is a member” was added to claim 170. This amendment has not been entered. This feature has been incorporated into claims 149, 158, 164, 175 by an earlier amendment entered after a non-final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention is directed to systems and methods for updating a user profile of a user who experiences an audio video program. A user may be associated with one or more groups. Both groups and users can be assigned attributes. According to the invention, one or more of the attributes of a group can be inherited by a user who is a member of that group. Those attributes can then be stored in a hierarchical attribute-value pair data structure (p. 8, lines 15-16).

The hierarchical attribute-value pair data structure is also referred to in the application as a “donut.” The hierarchical structure is further explained at p. 27, lines 17-23, of the application. The application describes that the data structure can include “crumbs” (smaller units of data) as well as one or more “sub-donuts.” The application further describes that “donuts are stored with hierarchical relationships, meaning that a donut can have associated sub-donuts and the sub-donuts can also each have associated sub-donuts. The donut may thus have many levels of sub-donuts within its hierarchical structure.” (p. 27, lines 20-23)

The inheritance of group attributes by a member is broadly described in the application at pgs. 30-32. The application describes that the module shown in Table 1 on p. 30 can obtain “crumb” values from a “donut” service, set existing values and create new values as desired. The application further describes that the server may receive user-profile

content from other sources on a network-based system and that the content can be selectively incorporated into the “donut” (p. 32, lines 4-11).

VI. GROUND S OF REJECTION TO BE REVIEWED ON APPEAL

Claims 149-150, 158-161, 164-166, 169-170 and 175-176 stand rejected under 35 USC 103(a) as being obvious over Becker in view of Kramer.

Claims 151-157, 162, 163, 167, 168, 171-174 and 177-183 stand rejected under 35 USC 103(a) as being obvious over Becker in view of Kramer in further view of Savitzky.

VII. ARGUMENT

A. The rejection of claims 149-150, 158-161, 164-166, 169 and 175-176 under 35 USC 103(a) should be reversed.

Claims 149-150, 158-161, 164-166, 169 and 175-176 stand rejected under 35 USC 103(a) over Becker in view of Kramer. Appellant submits that none of the references, alone or in combination, disclose all the limitations of independent claims 149, 158, 164 and 175. Furthermore, appellant submits that the Examiner has misunderstood and misapplied both Becker and Kramer and substantively misquoted Becker.

None of the references relied upon are directly relevant to the invention of the pending application and none disclose methods, apparatuses, or means including a user profile comprising a hierarchical attribute value-pair data structure and inheritance of user profile attributes into a user profile from a group in which the user is a member.

In the final rejection, the Examiner stated that Becker at col. 9, lines 59-60, shows the modification of a profile “based on usage or inheritance” and that it shows “inheritance of user profile attributes into the user profile from a group in which the user is a member as ‘values may be weighted by various categories...the system can create and update a separate probability table for each category [group] to be used, col. 10, lines 47-64.’” (Office Action at p. 2-3.)

The Examiner first cited col. 9, lines 59-60. This portion of Becker discloses a multi-level prediction table wherein “one or more previously selected pages 540 as well as the currently selected page 550 is used to predict the likely next-to-be-selected page 560.”

Appellant recognizes that this portion of Becker shows the use of a prediction table. However, even if the prediction table were a user profile (and appellant asserts that it is not) the cited portion of the reference does not teach inheriting user profile attributes into the user profile from a group of which the user is a member. At col. 9, lines 61-64, Becker describes a multi-level table as one in which “each column again represents a particular page that may be selected, while each row represents a particular ordered combination of previously-selected pages.” Appellant asserts that while the table of Becker receives data, there is no disclosure of inheriting either data or user profile attributes into the table from a group of which a user is a member.

The Examiner further cited col. 10, lines 47-64, as showing the inheritance of user profile attributes. This portion of Becker discloses that values in the prediction table may be weighted by various categories including statistics about users. Specifically, Becker at col. 10, lines 56-60, discloses that “[v]alues 520 can be set to zero to discourage viewers of a household (or entire subscriber base for the Internet Services Provider) from viewing pornography or other material. For example, in step 290 a page would have zero probability and therefore never be predictively cached.” Appellant asserts that this portion of Becker also fails to disclose the inheriting user profile attributes into the user profile from a group of which the user is a member. This portion of Becker discloses merely that a value in the table can be set for a plurality of subscribers. The table of Becker is shown in Fig. 5A. The table is simply a two dimensional data table representing the probabilities of transitioning from one web page to another. Appellant submits that the setting of a probability value to zero for viewers of a household or even an entire subscriber base does not involve inheriting user profile attributes into a user profile from a group of which the user is a member. Furthermore, the disclosure in Becker at col. 10, lines 47-64, of a “category to be used” does not teach a group, as suggested by the Examiner. Rather, the categories of Becker (time, age of user browsing the web, statistics about users and income level) are nothing more than collections of parameters and do not teach a group of which the user is a member.

The Examiner further stated that Becker discloses inheritance at col. 10, lines 47-64, because it discloses that “‘an entire subscriber database’ [group] inherits the attribute to be able to view or not view pornography.” (Office Action at 7-8.) Appellant respectfully asserts that Becker does not teach the claimed features and that Examiner has substantively misquoted and misapplied the reference.

The Examiner stated at p. 7-8 that Becker discloses that “‘an entire subscriber **database**’ [group] inherits the attribute to be able to view or not view pornography.” (emphasis added.) However, appellant respectfully submits that the reference makes no such disclosure. Becker merely discloses setting values in a prediction table so that an “entire subscriber **base**” can be prevented from viewing certain material. (emphasis added.) Becker does not teach the use of a “database.” Appellant submits that a “subscriber base,” as used in Becker, is simply an abstract group of subscribers while a “subscriber database” is commonly understood to be a structured set of persistent data associated with subscribers usually stored in electronic media. Thus, there are significant and material differences between a “subscriber base” and a “subscriber database” and therefore the disclosure of one does not disclose, teach, or otherwise suggest the other. A group of subscribers, *i.e.* people, cannot inherit and store profile attributes as those terms are used in this application. Even if Becker disclosed a “subscriber database” or a group, appellant submits that that the Examiner has not identified any portion of Becker that discloses inheriting attributes into a profile from a group of which the user is a member.

The Examiner also stated that Becker and Kramer teach storing the user profile information in a hierarchical attribute-value pair data structure.

At p. 3, lines 7-9 of the Office Action, the Examiner stated that “Becker teaches a hierarchical attribute value pair type data structure that can be called a donut, col. 9, lines 1-10.” While appellant recognizes that Becker discloses a simple table for storing values, appellant asserts that the data stored in the tables of Becker is not in a “value pair” data structure and that the data stored in the tables of Becker is also not hierarchical. Despite the Examiner’s assertion that Becker teaches these features, one the same page, at lines 17-18,

Examiner also stated that “Becker teaches the invention...except for explicitly teaching a hierarchical attribute value pair data structure.” Appellant recognizes that Becker does not teach this feature.

Appellant notes that Becker is directed to the estimation of web pages most likely to be requested by a requesting computer. To that end, Becker tracks patterns of requests for pages. This information is kept in the form of a table that is used to identify and/or predict those pages that are often requested following each requested page or sequence of pages. Thus, the teachings of Becker are not even relevant to the present application.

The Examiner stated that Kramer teaches that “the consumer profile includes hierarchical attribute vectors which encode attributes of a consumer at progressively higher levels of abstraction.” While appellant recognizes that Kramer teaches a set of hierarchical attribute vectors, appellant submits that Kramer does not teach a value-pair data structure. The attribute vector of Kramer is shown in Fig. 9 of Kramer. Fig. 9, consistently with the specification of Kramer, shows that the hierarchical attribute vector is simply a one-dimensional array. Kramer at col. 22, lines 17-22, further describes the hierarchical attribute vector as “a base level vector 902 shows the vector quantity x comprising a number of base level attributes, having scalar values x_1, x_2, x_3 , up to x_n . Each scalar value can represent a different consumer attribute.” Thus, Kramer discloses a simple vector array of values. While Kramer discloses a hierarchical relationship among vectors, there is no disclosure of a value-pair data structure.

Accordingly, the final rejection of claims 149-150, 158-161, 164-166, 169 and 175-176 should be reversed.

B. The rejection of claim 170 under 35 USC 103(a) should be reversed.

Claim 170 stands rejected under 35 USC 103(a) over Becker in view of Kramer. The Examiner provided the same rationale in rejecting claim 170 as in rejecting claims 149, 158, 164 and 175. While the amendment to add the feature of “inheriting user profile attributes into the user profile from a group of which the user is a member” filed after final rejection has not been entered, as shown above, the cited references do not show the feature of claim

170 of “storing the user profile information in a hierarchical attribute value-pair data structure.” The failure of the references to disclose this feature is sufficient basis to support a reversal of the final rejection of claim 170 and therefore the final rejection of claim 170 should be reversed.

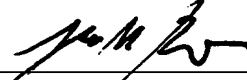
C. The rejection of claims 151-157, 162, 163, 167, 168, 171-174 and 177-183 under 35 USC 103(a) should be reversed.

The Examiner further cited Savitsky as teaching rules that read on a hierarchical attribute-value pair data structure. In support of this rejection, the Examiner referred to col. 11, lines 32-34 of Savitsky as showing an agent that modifies a page according to filtering rules before documents are returned to a client. The quoted portion of Savitsky is the only portion of Savitsky that refers to a filtering rule. Appellant respectfully submits that the minimal disclosure in Savitsky does not teach a hierarchical attribute-value pair data structure because it does not teach either a value-pair data structure or a hierarchical relationship. Accordingly, the final rejection of claims 151-157, 162, 163, 167, 168, 171-174 and 177-183 should be reversed.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, appellant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 559442000600.

Dated: March 8, 2005

Respectfully submitted,

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APPENDIX OF APPEALED CLAIMS

149. A method for compiling and maintaining information for use in routing and transmitting content to a machine via a network by specifying particular fields within a computer-readable medium, the method comprising the steps of:

- receiving user activity information for updating a user profile;
- specifying in the medium user profile information for determining a uniform resource identifier for identifying content to transmit to the machine and an identification of the machine;
- inheriting user profile attributes into the user profile from a group of which the user is a member; and
- storing the user profile information in a hierarchical attribute value-pair data structure, wherein the content is selected based on the user profile and is used to enhance an audio video program.

150. The method as claimed in claim 149, wherein the content comprises an executable object.

151. The method of claim 149, further comprising the step of specifying in the medium information identifying preferences of the user.

152. The method of claim 149, further comprising the step of dynamically changing the user profile information in the hierarchical structure based upon updated information.

153. The method of claim 149, further comprising the step of querying the user in order to obtain user profile information.

154. The method of claim 149, further comprising the step of transmitting content to the machine for a particular service based upon user profile information.

155. The method of claim 149, further comprising the step of dynamically updating the user profile information.

156. The method of claim 149, further comprising the step of specifying the user profile information for use in selecting at least one of the following to transmit to the machine: information available via a Uniform Resource Identifier, video content, audio content, multimedia content, a particular video stream, or an executable object.

157. The method of claim 149, further comprising the step of specifying the address of one or more devices selected from the group consisting of a personal computer, a television, a cable box, a satellite box, video game console and a personal digital assistant.

158. A method of accessing information for use in routing and transmitting content to a machine via a network, the method comprising the steps of:

accessing, via a network connection, a user profile comprising at least one hierarchical attribute value-pair data structure stored in a computer-readable medium on a server;

transmitting, to the server, data comprising an identification of the machine and user profile information further comprising user activity information for determining a uniform resource identifier, wherein the data is stored on the server in the at least one hierarchical attribute value-pair data structure; and

inheriting user profile attributes into the user profile from a group of which the user is a member, and

wherein the content is selected based on the user profile and is used to enhance an audio video program.

159. The method as claimed in claim 158, wherein the content comprises an executable object.

160. The method of claim 158, further comprising the step of storing the data structure in a memory associated with the machine.

161. The method of claim 158, further comprising the step of storing the data structure in a memory associated with a server having the network connection with the machine.

162. The method of claim 158, further comprising the step of dynamically updating the user profile information.

163. The method of claim 158, further comprising the step of selecting, based upon the user profile information, at least one of the following for transmission to the machine: information available via a Uniform Resource Identifier, video content, audio content, multimedia content, a particular video stream, or an executable object.

164. Apparatus for accessing information for use in routing and transmitting content to a machine via a network, comprising:

networking means for establishing a network connection from a machine;

accessing means for accessing via the network connection a hierarchical attribute-value pair data structure stored in a computer-readable medium;

inheritance means for inheriting user profile attributes into a user profile from a group of which a user is a member; and

transmitting means for transmitting information via the network connection for specifying in the data structure an identification of the machine, and user-profile information comprising user activity information for determining a uniform resource indicator,

wherein the content is selected based on the user profile and is used to enhance an audio video program.

165. The apparatus of claim 164, further comprising storage means associated with the machine for storing the data structure.

166. The apparatus of claim 164, further comprising storage means associated with a server having the network connection with the machine, the storage means being arranged to store the data structure.

167. The apparatus of claim 164, further comprising means for dynamically updating the user-profile information.

168. The apparatus of claim 164, further comprising means for selecting, based upon the user-profile information, at least one of the following for transmission to the machine: information available via a Uniform Resource Identifier, video content, audio content, multimedia content, a particular video stream, or an executable object.

169. The apparatus of claim 164, wherein the content comprises an executable object.

170. A method for compiling and maintaining information for use in routing and transmitting content to a machine via a network by specifying particular fields within a computer-readable medium, the method comprising the steps of:

receiving user activity information for updating a user profile;
specifying in the medium user profile information for determining a uniform resource identifier for identifying content to transmit to the machine and an identification of the machine;

inheriting user profile attributes into the user profile from a group of which the user is a member,

storing the user profile information in a hierarchical attribute value-pair data structure;
and

• selecting content for at least one user based on examination of at least one other user profile,

• wherein the content is selected based on the user profile and is used to enhance an audio video program.

• 171. The method of claim 170, wherein the step of selecting content for at least one user further comprises the step of selecting content for a group of users.

• 172. The method of claim 170, wherein the step of selecting content for at least one user further comprises the step of examining profiles of users in one or more groups of which the at least one user is a member.

• 173. The method of claim 172, wherein the step of examining profiles of users in one or more groups of which the at least one user is a member further comprises the step of examining profiles of one or more subsets of the one or more groups of which the at least one user is a member.

174. The method of claim 170, wherein the step of selecting content for at least one user further comprises the step of examining profiles of users in one or more groups of which the at least one user is a not a member.

175. An apparatus for compiling and maintaining information for use in routing and transmitting content to a machine via a network by specifying particular fields within a computer-readable medium, the apparatus comprising:

a receiver for receiving user activity information for updating a user profile; and
a computer-readable medium comprising user profile information for determining a uniform resource identifier for identifying content to transmit to the machine and an identification of the machine,

wherein the user profile comprises information in a hierarchical attribute value-pair data structure and further comprises inherited user profile attributes from a group of which the user is a member, and

wherein the content is selected based on the user profile and is used to enhance an audio video program.

176. The apparatus of claim 175, wherein the content comprises an executable object.

177. The apparatus of claim 175, wherein the user profile information further comprises information identifying preferences of the user.

178. The apparatus of claim 175, wherein the user profile information is dynamically changed based upon updated information.

179. The apparatus of claim 175, wherein the user profile information is obtained by querying the user.

180. The apparatus of claim 175, wherein the content is transmitted to the machine for a particular service based upon user profile information.

181. The apparatus of claim 175, wherein the user profile information is dynamically updated.

182. The apparatus of claim 175, where the user profile information is used to select at least one of the following to transmit to the machine: information available via a Uniform Resource Identifier, video content, audio content, multimedia content, a particular video stream, or an executable object.

183. The apparatus of claim 175, wherein the machine is selected from the group consisting of a personal computer, a television, a cable box, a satellite box, video game console and a personal digital assistant.